ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES
PESTICIDE MANAGEMENT SECTION
1445 Federal Drive • Montgomery, Alabama 36107-1123

John McMillan
Commissioner

January 25, 2018

Tawanda Maignan, Chief
U.S. EPA / Office of Pesticide Programs
Emergency Response Team
Document Processing Desk (EMEX)
Room S4900, One Potomac Yard
2777 Crystal Drive
Arlington, VA 22202

Dear Ms. Maignan:

The Alabama Department of Agriculture and Industries herby submits a recertification request for a specific exemption granted in FY 16 (16AL02) for the use of the Dow AgroSciences, LLC product Transform WG (EPA Reg. No. 62729-625), active ingredient sulfoxaflor, to control tarnished plant bug *(Lygus linerlaris)* in cotton in 29 North Alabama counties. The petition has been reviewed again by the Alabama Pesticide Review Committee and they have recommended approval of the request for recertification without any changes to the original petition. Addition information has been requested as follows:

The total number of years the Alabama Department of Agriculture has requested this use is 2 (two) years;

the number of acres treated (use report) each year was 67,942 acres in 2017 ; and

the growing season in Alabama is April-October.

If any further information is required please contact me directly at 334-240-7237 or tony.cofer@agi.alabama.gov .

Sincerely,

Tony L. Cofer, Division Director
Pesticide Management, Plant Industries and Professional Services
Alabama Department of Agriculture & Industries

CC: Section 18 Dow Transform WG
Tami Jones-Jefferson, Dow AgroSciences, LLC

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No.: 62719-625

For Control of Lygus Bugs in Cotton
Section 18 Emergency Exemption
File symbol: XXXXXX

FOR DISTRIBUTION AND USE ONLY IN ALABAMA UNDER SECTION 18 EMERGENCY EXEMPTION IN THE COUNTIES OF BLOUNT, CALHOUN, CHEROKEE, CLAY, CLEBURNE, COLBERT, CULLMAN, DEKALB, ETOWAH, FAYETTE, FRANKLIN, JACKSON, JEFFERSON, LAMAR, LAUDERDALE, LAWRENCE, LIMESTONE, MADISON, MARION, MARSHALL, MORGAN, PICKENS, RANDOLPH, ST. CLAIRE, SHELBY, TALLADEGA, TUSCALOOSA, WALKER, AND WINSTON.

This Section 18 Emergency Exemption is effective XXXXX and expires XXXXX.

- This labeling must be in the possession of the user at the time of application.
- It is in violation of federal law to use this product in a manner inconsistent with its labeling.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Any adverse effects resulting from the use of Transform WG under this emergency exemption must be immediately reported to the Alabama Department of Agriculture

Environmental Hazards Statement: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Risks to managed and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 a.m. or after 7:00 p.m. local time or when the temperature is below 55 degrees Fahrenheit (°F) at the site of application.

Directions for Use

Pests and Application Rates:

Pests	Transform WG (oz/acre)
tarnished plant bug	1.5 – 2.25 (0.047 – 0.071 lb ai/acre)

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. If known apiaries are within one mile of cotton fields intended for treatment, applications should be made within three hours of sunset during the flowering period. Growers are advised to refer to and, where feasible, observe the cooperative standards outlined in the Alabama Department of Agriculture and Industries and the State Apiarist along with the regulatory control of the Alabama Bee Program for additional guidance and bee conservation stewardship efforts.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Spray Drift Management: Applications are prohibited above wind speeds of 10 miles per hour (mph).

Application Rate: Use a higher rate in the rate range for heavy pest populations. Two applications may be required for optimum tarnished plant bug control under high pest pressure or heavy immigration of plant bugs from other crops.

Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not make more than four applications per acre per year.
- Do not make more than two consecutive applications per crop.
- Do not apply more than a total of 8.5 oz of Transform WG (0.266 lb ai of sulfoxaflor) per acre per year.

R396-182
Approved: __/__/__
Replaces R396-175

Dow AgroSciences

Dow AgroSciences LLC
9330 Zionsvile Road
Indianapolis, IN 46163

dowagro.com

December 7, 2017

Dr. Tim Reed
Tennessee Valley Research and Extension Center
P. O. Box 159
Belle Mina, AL 35615

Re: Support letter for Transform™ WG Section 18 on cotton

Dear Dr. Reed,

Per your request, this letter is to confirm that Dow AgroSciences supports the pursuit of a Section 18 emergency exemption for Transform WG to control plant bugs in cotton in the state of Alabama. Transform WG has provided excellent efficacy against plant bugs in previous use under both Section 18 exemptions and Section 3 registration, with no negative impacts on non-target insects. It represents a new class of chemistry with a novel mode of action, and controls pests resistant to other classes of chemistry. Although Section 3 registration was recently reestablished for Transform, cotton is not on the label at this time.

If you have questions, please do not hesitate to call me.

Sincerely,

Jamey Thomas, Ph.D.
US Regulatory Manager
Dow AgroSciences

cc: Tami Jones-Jefferson, DAS

Tennessee Valley Research and Extension Center
9494 Experimental Loop
Madison, AL 35756

November 15, 2017

Tony L. Cofer
Division Director
Alabama Department of Agriculture and Industries
1445 Federal Drive
Montgomery, AL 36107-1123

Dear Mr. Cofer,

The purpose of this letter is to request an emergency exemption (Section 18) for the use of sulfoxaflor (Transform WG™, DowDuPont) to manage tarnished plant bug, *Lygus lineolaris* in cotton in 2018 in 29 North Alabama counties. Counties which are to be included in this Section 18 request are Blount, Calhoun, Cherokee, Clay, Cleburne, Colbert, Cullman, DeKalb, Etowah, Fayette, Franklin, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, Morgan, Pickens, Randolph, St. Clair, Shelby, Talladega, Tuscaloosa, Walker, and Winston. According to information provided by the Southeastern Boll Weevil Eradication Foundation cotton was grown in 24 of these 29 counties in 2017 and the total cotton acreage was 171,766 acres. This represented 40% of Alabama's total cotton acres in 2017 . The need for Transform WG insecticide for inclusion in an effective integrated pest management program for cotton in north Alabama has not changed since last year, as no new chemistries have been registered to address this tarnished plant bug problem. This petition requests that the number of acres approved to be treated with Transform in 2018 be increased from 75,000 acres to 150,000 acres due to the significant increase in acreage in north Alabama in 2017. Planted cotton acres in 2018 are expected to be similar to 2017 in north Alabama.

Over the last 5 years, sulfoxaflor has replaced more toxic insecticides including pyrethroids, organophosphates, and neonicotinoids in Alabama cotton IPM programs. Because of its strong level of efficacy, relative safety to beneficial arthropods and pollinators, and protection of cotton yields Transform has become an important component of the cotton farmers' IPM program in Alabama. During 2017 there was a significant increase in the number of cotton fields with dual Bt gene technology that suffered boll damage by cotton bollworm larvae in Alabama. The potential for cotton bollworm larvae to reduce cotton yields is diminished when

Transform can be used to control tarnished plant bugs and conserve beneficial arthropods.

I am requesting this Section 18 only for the northern portion of the state because the tarnished plant bug (=TPB) has historically been much more difficult to control in north Alabama than south Alabama. The TPB has been a pernicious pest of cotton in Alabama since the 1960's and possibly earlier. During 1967 and 1974 the TPB caused major yield reductions in Alabama, especially in north Alabama (Barry Freeman, Associate Professor Emeritus, Auburn University Department of Entomology and Plant Pathology).

The Cotton Insect Losses Reports in the Proceedings of the Beltwide Cotton Conference show that the average per cent reduction in yield caused by the TPB in north and south Alabama during the period 1979-2015 was 2.25% and 0.82% respectively. The low 0.675% and 0.75% yield reduction of cotton by TPB in 2016 and 2017, respectively in north Alabama was due in part to the availability of Transform for use on cotton via the 2016 and 2017 Section 18 Emergency Exemptions granted by EPA. Despite the application of insecticides to reduce TPB populations the estimated number of cotton bales lost to the TPB in north Alabama from 1979 through 2017 was 267,480 bales which if valued at 60 cents/pound is a $77 million economic loss.

It was estimated that TPB was responsible for 45% of all cotton losses to insects in north Alabama from 2011 through 2015. Transform usage helped reduce this loss to 33% and 27% in 2016 and 2017 respectively. The most recent year in which TPB caused significant yield reductions on some north Alabama farms was 2014. During 2014 some fields in north Alabama required up to five insecticide applications for TPB management. Insecticides suppressed TPB numbers initially but they soon rebounded and required retreatment. TPB retreatment in late July and into August was mainly for immatures which were derived from eggs laid by adults in late June and early to mid-July.

Five insecticide applications for TPB were also required for experimental cotton plots at the Tennessee Valley Research and Extension Center at Belle Mina in 2014. It was estimated that about 70,000 acres of cotton in north Alabama were treated at least once for plant bugs in 2014 and the average number of sprays per treated acre was three. Consultants reported that in some cases severely damaged fields were adjacent to fields that had much smaller numbers of TPB's. TPB feeding resulted in very small bolls being damaged and shed in large numbers. Fields which did not have TPB feeding on small bolls did not have a large percentage of small bolls

shedding. During most years in north Alabama the TPB can be managed successfully with one to two insecticide applications. However during some years this pest is extremely difficult to control in many cotton fields and yield losses are often the result. During the 3 year period of 2015 through 2017 in TPB studies at the Tennessee Valley Research and Extension Center cotton test plots treated one to 2 times with Transform had average yields that were 466 pounds of seed cotton per acre greater than plots that received no insecticide treatment.

Insecticides which have provided the most consistent reduction of TPB numbers in cotton when applied at current labeled rates in north Alabama trials conducted in 2015 through 2017 were the organophosphates acephate and dicrotophos, the insect growth regulator novaluron and the sulfoximine sulfoxafor. Dicrotophos can only be used for TPB control from first bloom to 30 days prior to harvest. Use of acephate can result in aphid and spider mite outbreaks. Novaluron does not control adult TPB's. During the 5 years of Transform usage in Alabama there have been no reports of adverse effects of the insecticide on bees or other pollinators. The loss of Transform as a key component of our Cotton IPM Program will enhance the probability of economic loss for North Alabama cotton growers who are also challenged by a low market price for cotton.

Sincerely,

Tim Reed

Tim Reed, Ph.D.
Extension Entomologist